

REMARKS

Upon entry of the Amendment, claims 1-3 and 5-14 will be all the claims pending in the application. Claims 1 and 5 have been amended. Claim 4 has been canceled without prejudice.

In the present Amendment, claim 1 has been amended to incorporate the subject matter previously recited in claim 4, except for that in claim 1, “-(R⁵)_m-OC(O) (R⁵)_m CR⁴=CR⁴₂” has been omitted from the Markush group of the alternatives of R¹.

Claim 1 has been further amended to correct a typographical error, to recite that “R¹ is independently in each occurrence...or iii) a halogenated derivative of ~~iii) or iv)~~ i) or ii).”

Claim 5 has been amended to delete “C₁₋₄ alkylacrylate” from the Markush group of the alternatives of R¹.

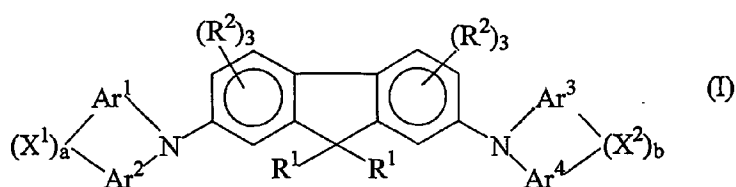
No new matter has been added, and entry of the Amendment is respectfully requested.

Claims 1-12 have been rejected as being unpatentable over Gao et al. (US 2005/0239636 A1; “Gao”) in view of Ishizawa et al. (US 7,012,123 B2; published as US 2003/0204036; “Ishizawa”).

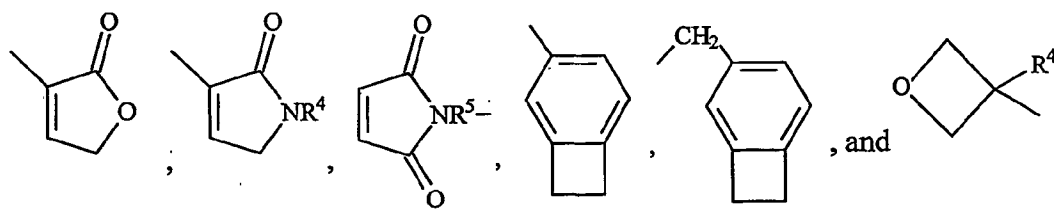
Claims 13 and 14, are rejected under 35 U.S.C. 103(a) as being unpatentable over unpatentable over Gao et al. (US 2005/0239636 A1) in view of Ishizawa et al. (US 7,012,123 B2) and Kikuchi et al. (US 5,378,510 A).

Applicants respectfully traverse. The above rejections should be withdrawn because there is no motivation to combine the cited references; and even if the references were somehow combined, the suggested combination of Gao in view of Ishizawa and Kikuchi, does not disclose or render obvious the presently claimed compound.

Claim 1 recites a compound of the formula:

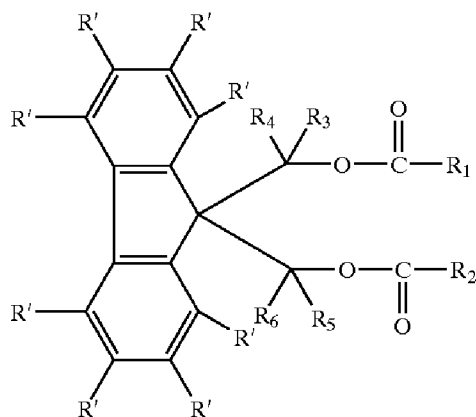


Claim 1, as amended, requires that R^1 in at least one occurrence is selected from the group consisting of $-(R^5)_m-CR^4=CR^4_2$, $-(R^5)_m-CR^4\equiv CR^4$, $-(R^5)_m-O(R^5)_m-CR^4=CR^4_2$, $-(R^5)_m-O(R^5)_m-C\equiv CR^4$, $-(R^5)_m-C(O)(R^5)_m-CR^4=CR^4_2$, $-(R^5)_m-C(O)(R^5)_m-C\equiv CR^4$, $-(R^5)_m-OC(O)(R^5)_m-C\equiv CR^4$, $-(R^5)_m-COO(R^5)_m-CR^4=CR^4_2$, $-(R^5)_m-COO(R^5)_m-C\equiv CR^4$, $-(R^5)_m-O(CO)O(R^5)_m-CR^4=CR^4_2$, $-(R^5)_m-O(CO)O(R^5)_m-C\equiv CR^4$,



where R^4 is hydrogen, halogen, C_{1-20} hydrocarbyl, C_{1-20} halohydrocarbyl, or C_{1-20} halocarbyl; R^5 is C_{1-20} hydrocarbylene, C_{1-20} halohydrocarbylene, or C_{1-20} halocarbylene; and m is 0 or 1.

Gao is cited as disclosing the claimed compound, except for the amino substituents on the fluorenyl skeleton. Specifically, the Examiner cites Gao at page 8 as disclosing the following **compound 1**:

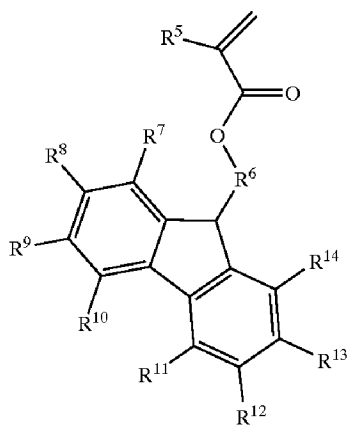


(compound 1)

where R' = hydrogen ([0392]), R₁ = R₂ = vinyl ([0029]), and R₃-R₅ = hydrogen ([0022]).

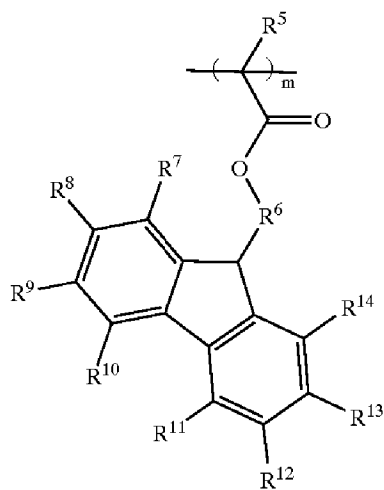
The Examiner acknowledges that that Gao does not disclose amino substituents on the fluorenyl skeleton (at the 2,7- position).

Ishizawa is relied upon as disclosing (at Col. 5, line 55) the following **compound 2** suitable for use as a charge-transporting material.



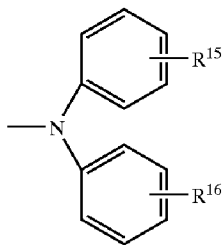
(compound 2)

The Examiner contends that Ishizawa discloses (at Col. 3, line 45) that **compound 2** can be polymerized to produce **compound 3** having the following structure,



(compound 3)

with R⁵ = hydrogen (Col. 3, line 55), R⁶ = methyl (Col. 3, line 55) or none (Col. 3, line 56), and R⁸ = R¹³ being both the diphenylamino group (Col. 4, line 1), represented by the following formula.



The Examiner then concludes that it would have been obvious to substitute biphenyl amino groups as disclosed by Ishizawa for two of the hydrogens of compound 1 of Gao to result in the compound of the present application.

Applicants respectfully disagree.

Gao does not disclose or teach the compound of the present claims.

As the Examiner corrected noted that Gao does not disclose amino substituents on the fluorenyl skeleton (at the 2,7- position).

Also, compound 1 of Gao does not have the substituent corresponding to R¹ at 9 position of the compound of the present claims.

In Gao, the substituents at 9 position would correspond to “-(R5)_m-OC(O)(R5)_m CR⁴ = CR⁴₂” of the original claim 1 and “C1-4 alkylacrylate” of the original claim 5 of the present application. However, as noted, claim 1 has been amended to delete “-(R5)_m-OC(O)(R5)_m CR⁴ = CR⁴₂” from the Markush groups of alternatives of R₁. Claim 5 has been amended to delete C1-4 alkylacrylate from the Markush groups of alternatives of R₁.

Further, Applicants respectfully submit that there is no motivation to combine the teachings of Gao and Ishizawa. In particular, there is no motivation for combining the references to specifically substitute biphenyl amino groups as disclosed by Ishizawa for two of the hydrogens of compound 1 of Gao at the 2,7-position.

First, Gao is directed to solid catalyst component for polymerization of olefins and catalyst comprising the same. Gao does not teach anything about fluorenes compounds useful as luminescent materials, *and* there is no teaching anywhere within Ishizawa for substituting its biphenyl amino groups into a catalyst component to turn the catalyst component into a fluorene compounds for films. Therefore, there would be no expectation of success when combining, and hence no motivation to combine, the teachings of Gao and Ishizawa.

Secondly, the Examiner adopts only the “biphenyl amino groups” from compound 2 of Ishizawa to substitute two of the hydrogens of compound 1 of Gao, the Examiner is engaging in hindsight reconstruction of Applicants' invention.

Still further, even if Gao and Ishizawa are combined, the compounds obtained do not have the substituent R₁ of the present invention at 9-position on fluorenyl skeleton. The compound obtained by combining Gao and Ishizawa would not be the compound of the present invention.

Kikuchi is cited as disclosing an organic EL device. Kikuchi does not make up the noted deficiencies of Gao and Ishizawa.

Accordingly, the present claims are not obvious over Gao, either alone or in view of Ishizawa and Kikuchi. Reconsideration and withdrawal of the present §103(a) rejections are respectfully requested.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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